

## ABSTRACT

A detection and classification method of a shape in a medical image is provided. It is based on generating a plurality of 2-D sections through a 3-D volume in the medical image. In general, there are two steps. The first step is feature estimation to generate shape signatures  
5 for candidate volumes containing candidate shapes. The feature estimation method computes descriptors of objects or of their images. The second general step involves classification of these shape signatures for diagnosis. A classifier contains, builds and/or trains a database of descriptors for previously seen shapes, and then maps descriptors of novel images to categories corresponding to previously seen shapes or classes of shapes.